

ABSTRACT

A power supply topology having a first path configured to be coupled to a controllable DC power source, a second path configured to be coupled to a battery, and a third path configured to be coupled to a system load, wherein the first, second, and third paths are coupled to a common node. A first switch is coupled to the first path to allow selective coupling of the controllable DC power source to the system load via the common node, and a second switch is coupled to the second path to allow selective coupling of the battery to the common node. The power supply topology may be used with existing adapters or with a controllable adapter to provide for a one step power conversion. The power topology may be utilized to enable the controllable DC power source and a battery to provide power in parallel to a system load.